

Boiler Work Group Meeting
November 20, 1997

DISCUSSION & DECISIONS

- Jim Stumbar reviewed the Coordinating Committee meeting and guidance provided by the Coordinating Committee to the Work Groups. Mr. Stumbar informed the Work Group that he had accepted an invitation to make a presentation on status of work at the February Coordinating Committee meeting.
- Mr. Stumbar informed the Work Group that an ad hoc subgroup was being formed to coordinate efforts on boilers and incinerators subject to section 129. The members concurred that Jim Eddinger, Jim Stumbar, and Mike Hewett would be on the ad hoc group.
- Mr. Stumbar informed the Work Group that a pollution prevention subgroup was being formed by the Coordinating Committee to coordinate and inform members of all the Work Group's about pollution prevention activities. Three members from each Work Group are to be on the subgroup. Representatives from the Boiler Work Group chosen are: Miriam Lev-On (John deRuyter as alternate), Kim Davis, and Coleman Kavanaugh.
- Ruth Mead from ERG updated the Work Group on the inventory database and ICR survey. Ms. Mead informed the Work Group that release date for version 2 of the ICR survey is on schedule for mid-December, but the release date for version 3 of the inventory database has been pushed back to middle or late January. EPA provided to Work Group members the list of test reports that were reported to be available in responses to Part II of the survey. EPA also provided tables listing insufficient information in the survey responses that should be addressed by the Work Group. The Work Group is to review the tables and provide changes at the January meeting.
- Several members of the Work Group suggested that additional testing information may be obtained from boilers subject to BIF testing.
- Jim Eddinger of EPA discussed the methodology for determining the MACT floor. Several handouts were provided to the Work Group that may be used to develop the MACT floor, including: a summary of control devices at fossil fuel fired boilers, a summary of State regulations, and the distribution of boilers in each State. Several members requested that fenceline HAP information also be added to the tables. Other members expressed concern with using this information to determine the MACT floor.
- The Work Group formed 4 task groups to coordinate work between the subgroups. The members of the task groups are:

- Control technology and emissions - John deRuyter, Frank Ferraro, and Andy Bodnarik
- MACT floor - Mark Bryson, Bill Freeman, and Mike Soots
- Economics and cost- Gerald Doddington, Greg Gesell, and Paul Tucker
- Pollutants of interest and testing - David Marrack, Frank Ferraro, Wendell Brough, and Tom McGrath.

ACTION ITEMS

- ERG will review the State regulation information provided by Work Group members to identify fenceline HAP limitations. For those States where information is lacking, ERG will contact members of the State regulation subgroup to obtain the information.
- Members are to review the information in the 'insufficient survey responses' tables and provide changes for the January meeting.
- EPA and ERG will develop preliminary MACT floors for the January meeting.

NEXT MEETING

The next meeting will be held in Atlanta, Georgia on January 13 and 14. The format will be for the full Work Group to meet in the morning of the 13th and the subgroups to meet in the afternoon. The full Work Group will reconvene on the morning of the 14th. Agenda items include discussion of preliminary MACT floors, compounds of interest, pollution prevention, and presentation of status for the February Coordinating Committee meeting.

FOSSIL FUEL SUBGROUP MEETING
(November 20, 1997)

Attendees

Bob Bessette	Wendell Brough	Mark Bryson	Stanley Carter
John deRuyter	Gerald Doddington	Jim Eddinger	Michael Fisher
Bill Freeman	Alex Johnson	Jim Jordan	Miriam Lev-On
Jeffrey Roop	Gunseli Shareef	Larry Sollod	Edwin Weaver

Discussions and Decisions

- Volunteers for the four additional ad hoc groups were identified (see full meeting flash notes)
- It was agreed that the previously listed 16 subcategories based on fuel type and firing method would be the basis for further activity. These are listed below for reference.
 1. Natural gas (includes field gas, conventional natural gas, LNG, propane, etc.)
 2. Process gas
 3. Distillate oil
 4. Residual oil
 5. Bituminous coal- mass fired
 6. Bituminous coal- pulverized coal, dry bottom
 7. Bituminous coal- pulverized coal, wet bottom
 8. Bituminous coal- cyclone
 9. Bituminous coal- fluidized bed
 10. Subbituminous coal- pulverized coal, dry bottom
 11. Subbituminous coal- pulverized coal, wet bottom
 12. Anthracite coal- stoker
 13. Anthracite coal- fluidized bed
 14. Lignite- pulverized coal, dry bottom
 15. Lignite- pulverized coal, wet bottom
 16. Lignite- fluidized bed
- Jim Eddinger will work on the corrections and additional requested information from the last subgroup meeting. Modifications to the model boilers on the basis of fuel type will be made later when the model boilers are developed.
- EPA will take a first cut at summarizing information from the inventory database regarding the emissions control techniques currently applied to fossil boilers. This needs to be done carefully since QA/QC was not done for gas fired boilers, and version 3 of the inventory database is not yet available.

- No further action on the natural gas HAP list since the last meeting was conducted. Wendell Brough will further refine the list with additional columns of data focusing on the estimated emission rates and relative hazard of the individual HAPs. The draft list of HAPs of concern is very similar to the combustion turbine list.
- First drafts of the coal and oil HAP lists were reviewed. They will be further refined with additional data as above for the gas list. The Utility HAP report will be reviewed for screening applicability.
- All HAP lists are to be further refined prior to a combined HAP list meeting among the Boiler Work Group subgroups and the Emissions Monitoring and Testing work group. That combined discussion would resolve the use of surrogates and combined HAPs, with consideration of available test methods. This should all be done prior to the January meeting.
- The Fossil subgroup requested the Nonfossil and Wood subgroups to let them know what their actions will be with the ICR data, and what action the Fossil subgroup would need to take since most of the ICR information should be nonfossil in nature.

Action Items

- API will send its control technology summary from the inventory database to Jim Eddinger.
- Jim Eddinger will work on the corrections and additional requested information from the last subgroup meeting.
- The Utility HAP report will be reviewed for screening applicability.
- Jim Eddinger will get a copy of the economics presentation to all work group members. Any input to that group for overall economic impacts would be later in the process.
- Jim Eddinger agreed to check with EPA regions regarding upcoming scheduled emissions testing to see if there were opportunities for gathering new emissions data or piggy-backing additional HAP emissions tests.

Next Meeting

- The next Fossil Fuel subgroup meeting is scheduled for January 13.

NON-FOSSIL FUEL SUBGROUP MEETING
(November 20, 1997)

Attendees

Roy Oommen	Todd Barker	Mike Blumenthal	Andrew Bodnarik
David Cooper	Gordon Gaetke	Michael Hewett	Coleman Kavanaugh
David Lordi	Tim McGrath	David Marrack	Jim Stumbar
Paul Tucker			

Discussions and Decisions

- The subgroup discussed subcategorization and developed a preliminary list of subcategories based on sizes, types, and classes. Several of the subcategories listed are covered in the fossil and wood subgroup lists. The subcategories are listed by class and type:

Fire-tube

Natural gas
Distillate oil
Residual oil
#4 fuel oil
Wood
Digester gas
Landfill gas

Packaged water-tube

Natural gas
Distillate oil
Residual oil
#4 fuel oil
Wood
Digester gas
Landfill gas

Circulating fluidized bed

Tire derived fuel
Coal/tire derived fuel
Petroleum coke
Plastics
Coal/process engineered fuels
Biomass
Papermill sludge
Wood chips
Wood chips/coal
Wood chips/pet. Coke

Stokers-spreader

Coal
Coal/tire derived fuel
Coal/wood
Bagasse
Process engineered fuels
Plastics
Coal/wood bark
Coal/paper mill sludge
Wood/tire derived fuel
Process wood (treated, impure, fiberboard)
Biomass
Used oil and industrial process liquid

Stoker- stationary grates

Same fuel subcats as spreader

Stoker - moving grates

Same fuel subcats as spreader

<u>Suspension firing</u>	<u>Cell burners</u>	<u>Fluidized bed</u>
Plastics/natural gas	(Including dutch ovens)	Tire derived fuel
Sawdust/natural gas	Bagasse	Coal refuse
Sander dust or dust from	Processed wood	Plastics
processed wood	Bark	Coal
Biomass	Biomass	Coal/process engine
Used oil and industrial	Papermill sludge/wood	fuel
process liquid	Biomass	Biomass

The subgroup identified 5 different size classifications that would be combined with each subcategory: < 10 MMBtu, 10-50 MMBtu, 50-100 MMBtu, 100-250 MMBtu, and >250 MMBtu. Approximately 200-250 subcategories could be developed from the combination of sizes, types, and classes.

- The subgroup discussed model plants and reviewed previous work done by Andy Bodnarik, Catherine Beahm, and Paul Tucker. Members agreed to submit revised and additional model plants to Andy Bodnarik on December 5th. Mr. Bodnarik will then forward the information to EPA on December 12, EPA will forward this information to members of the subgroup on December 15. Members have until January 6 to comment on the model plants.
- Volunteers for the four additional ad hoc groups were identified (see full meeting flash notes)

Action Items

- EPA will post the HAP's list presented at previous meetings on the TTN
- Members will submit model plant information to Andy Bodnarik on December 5th. Mr. Bodnarik will then forward the information to EPA on December 12, EPA will forward this information to members of the subgroup on December 15. Members have until January 6 to comment on the model plants.

Next Meeting

- The next Non-Fossil Fuel subgroup meeting is scheduled for January 13.

WOOD SUBGROUP MEETING (November 20, 1997)

Attendees

Rich Anderson	Kim Davis	Jon Devine	Delbert Cline	Greg Gesell	Ruth Mead
Tom McGrath	Bob Palzer	Mike Soots			

Discussion and Decisions

- Preliminary subcategories were agreed on using a 3-dimensional matrix based on size, type, and class. The following are the components of the matrix:
 - Class: stokers and fluid beds
 - Sizes: > or = 100 MMBtu, 50-99 MMBtu, 10-49 MMBtu, < 10 MMBtu
 - Types (based on fuel): Clean wood (dry, < 20% moisture), clean wood (wet, > 20% moisture), treated wood (dry), treated wood (wet), blended wood (dry), blended wood (wet), co-fired wood with other non-wood materials.

The combination of sizes, types, and classes yields 56 subcategories

- Concern was expressed about emissions from burning resinous woods and stumps with dirt. It was agreed that requiring good combustion work practices, including preparation requirements would be a good way to address these concerns. Rich Anderson volunteered to investigate what would be reasonable work practices for such situations.
- The subgroup decided to defer dioxin discussions until the January meeting. Before that meeting, the subgroup would like to see what dioxin data is in the ICCR emission database for each subcategory of wood-fired units. Rich Anderson will also have a summary of some Dutch data for the January meeting.
- Regarding a HAP list, the subgroup is initially interested in evaluating the following pollutants. This list will be revisited in January.

Acrolein	Arsenic	Benzene	Chromium	Ethylene Dibromide
Formaldehyde	Lead	Mercury	PAH	Toluene
Vinyl Chloride	1,3-Butadiene			

- The subgroup will also consider simultaneous evaluation of CO, Nox, total hydrocarbons, and PM
- The subgroup chose members for the Work Group task groups (see full Work Group meeting section)

Action Items

- All subgroup members should circulate available emission data they have before the January 6 conference call.
- Thomas McGrath will summarize what is in the ICCR emission database.
- Kim Davis will investigate what test data for HAPs for wood-fired units may be available from the ICR survey.
- Rich Anderson will obtain a summary of Dutch dioxin data.

Next Meeting

- A conference call will be held 1 week prior to the January meeting (January 6, 1:30 pm EST)
- The next wood Subgroup meeting is scheduled for January 13.

ATTACHMENT

Full Work Group Attendance List

Rich Anderson	Todd Barker
Bob Bessette	Michael Blumenthal
Andrew Bodnarik	Wendell Brough
Mark Bryson	Stanley Carter
Delbert Cline	David Cooper
Kim Davis	John deRuyter
Jon Devine	Gerald Doddington
Jim Eddinger	Michael Fisher
Bill Freeman	Gordon Gaetke
Greg Gesell	Michael Hewett
Alex Johnson	Jim Jordan
Coleman Kavanaugh	Miriam Lev-On
David Lordi	David Marrack
Tom McGrath	Ruth Mead
Roy Oommen	Bob Palzer
Jeffrey Roop	Gunseli Shareef
Larry Sollod	Mike Soots
James Stumbar	Paul Tucker
Edwin Weaver	